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COSMOLOGY & PHILOSOPHY BY REQUEST

An initial premise that is not so distant now is that there is widespread plausibility even likelihood that Dark Matter and possibly Dark Energy exist. Iff earlier information *infra* in this document is agreed upon (regarding the Ghosts *sup.*), as being truthful, then telepathy and or telekinesis do in fact exist. This precipitates some opportunities in Cosmology for new and unique explanations to describe well known paradigms.

Two things are apparent with respect to the Big Bang Theory. First is the necessary truth of the fact that in the presence of the Hubble constant, it is possible to interpolate measurements of the Universe's expansion back to a point of Euclidian origin that will be the point location of where the Big Bang started. A second tenet of knowledge that needs to be reorganised relates to the Hubble constant, which has now become more complicated given the existence Dark Matter. Contemporary modelling and theorising proposes that intergalactic collisions are a real phenomenon in the Universe. The Milky Way itself is believed to be on an unavoidable collision path with the Andromeda Galaxy.

Both the aforementioned are simultaneously untenable and cannot co-exist. IF the Universe is continuing to expand outwards (at whatever rate, namely the Hubble rate) in the same manner as a balloon (all points expanding outwards), then no two Galaxies, irregardless of their proximity, can ever collide. The Hubble 'constant' of expansion must be abandoned as a pervasive (symmetrical?) feature of the Universe if any to galactic systems are to collide. Collisions can only occur if each of the two systems move at different speeds, or if they expand non-uniformly and still at different rates.

If we have evidence of two bandwidths that remain unknown, and we can see the effect of Dark Matter, then we must necessarily affirm that we have incomplete knowledge of the Universe. I decided long ago that the Universe as a whole could not be visualised and any attempt to contemplate its size or shape could only be successfully done using maths or some other set of designations. My personal preference as a model to describe the Universe comes from Choas Theory that describes a regular polygon whose interior holds a set of continually subdivided line segments. More familiar is The Mandelbrot Set that offers an approach to considering space where a system can have an infinite interior volume with a finite exterior perimeter.

If telepathy and telekinesis exist, then two bandwidths remain unknown. That means to me that there could be more bandwidths unknown. Both telepathy and telekinesis are methods of propagation of legitimate information for language based volitional life forms such as ourselves, and obviously neither are in the spectra of visible light. This makes me imagine the possibility of intelligent creatures that have vision sensitive to these unmapped frequencies, and who may utilise Dark Matter. This then lends itself to an interesting idea that simplifies the concept of multi-universes. It there are spectra of frequencies and matter that we cannot see but hypothetical other life could, then it would be possible to have simultaneous co-existing domains of space occupying the shape and form of the current universe. In other words, Universes could be like Xmas tree lights (a metaphor I later discovered (26/12/13) has between used in "The Universe : Explore The Edges Of The Unkown – The Complete Season Two") . A set of red ones illuminate a world for people who can see in that bandwidth, and simultaneously a set of blue ones illuminate a slightly different world for people who can see in that bandwidth, and both of them can be lighting up the same tree (Universe) at the same time whilst not interacting with each other. This is how one Cartesian Euclidean space can accommodate multiple Universes simultaneously without getting as complicated as String theory.

Remembering that the speed of light is a maxima that cannot be exceeded, and that at the topmost speed 'the hands on the clock-face stop moving', the *Sine qua non* is that time and light are what I call 'integrated'. This made up term can be thought of as being the same as when a couple of spoons of sugar are dissolved in a glass of hot water. When this has happened, I would describe the sugar and the hot water as being 'integrated', or inseparably mixed and interwoven to the extent that they become one and the same.

The Hubble Telescope has revealed in the Universe some extremely beautiful artefacts called Nebulae. Images of them provide cosmologists with evidence of extensive star formation. This has led to the adoption of the term 'nursery' for Nebulae where new stars are and have formed surrounded by clouds of dust. What is interesting is the theory that these Nebulae are what remain after a Supernova, the explosion of a star. Given that this is a fact, then it must necessarily be true that the Universe is being re-populated with stars that are substantially smaller than the remaining stars. The universe is therefore becoming more dispersed and granular.

Since light and time are integrated then they are effectively the same thing. This accords well with a refutation of Descartes *Cogito Ergo Sum* in favour of a statement by Carl Jaspers saying that "only in community with others can I be revealed in the act of mutual discovery and explanation**"** (Jaspers 1953). It is possible to take reasoning forward to arrive at a fundamental premise of consciousness, that remains in dispute with Descartes, whereby it takes another intelligent language skilled life form to verify for one other that the other life form is in fact more than in existence but is in fact authentically alive. If "I think therefore I am" is unilaterally employed as a measure or proof theorem, then the self-aware consciousness may not even occupy a position in the Universe, or take up space, and cannot therefore have any possible access to the passage or direction of time, and as such cannot asset existence notwithstanding life. Restated, any entity that may not occupy space and cannot mark the passage of time cannot prove that it exists or lives no matter how self-aware it is.

So now that it is possible to know that we are alive, there remains the 'integration' of light and time such that Light = Time α Distance. The certain proposition derived from this fact is that without light there is not time, and without both light and time, there can be no distance (regardless of any temporal proportionality value). Inversely, it is not possible to have time, which is light, without consuming some distance. There is no time without light. Pragmatically stated, even if you had a mechanical watch, you could not see its face without light. This affords common sense understanding regardless of one's preferred explanation for the origins of life or of the Universe. The Universe began when time started when it became illuminated and could be seen. This works well with Christianity as well as The Big Bang theory and so on.

So if the stars in the Universe are getting smaller and more numerous, then it is likely that the amount of light energy being put into the Universe is increasing. This will probably result in more exoplanets inhabiting 'the Goldilocks Zone' and increased opportunities and possibilities for intelligent life. But more elegantly, this also means that the amount of (electromagnetic energy) light in the Universe is increasing, and this serves as a proof theorem for the 'integration' of light and time. Both are increasing steadily in the Universe. A final step is to affirm The Second Law Of Thermodynamics and note that disintegration is increasing disorder. There is one very small thing that remains to be noted and that is the vexatious observation that time itself is moving from a state of absolute disorder (non-existence) to a state of immutability and totally unchangeable structure, in defiance of entropy.

MULTIPLE DIMENSIONS IN CARTESIAN SPACE

Extending the Xmas tree analogy of multiple co-existent universes occupying the same Cartesian space, is the notion that just as there is the proportionality of the **intergration(*)** between time and distance (disregarding non-linear peculiarities from Gravity etc) there is the direct integration of time and light. In the idea of co-existing overlapping multiple universes occupying the same Cartesian space, another view of the idea that describes both the simultaneous co-existence occupying the same 3 dimensions of physical space, is the further simultaneous occupation of the same physical space that can be overlayed by an extended view of what began to be described by entropy. This involves the hypothetical refutation of Entropy by time itself insofar as it does not describe any knowledge of the characteristics and extend of the disorder that time exists in prior to its measurement resulting in the same thing as a quantum notion being that the act of measurement is *prima facie* the cause of its change into an immutable state of absolute order.

If the red universe is invisible to the blue universe though they occupy simultaneously the same Cartesian space, they could further be described by a system of measurement that caused the transposition for (unknown undescribed) complete? Disorder into immutable absolute order by having a different direction in the 'arrow' of time, such the co-existence of the two worlds may be visible or have different integration because the precipitation of time gave it different directions. So, in one 3D area of Cartesian space, you can simultaneously have a red universe that can't see (all of) a purple universe, that is essentially the same as a slightly different purple universe but different because the 'arrow of time' in each purple universe (because of different measurement system) has resulted in time pointing in a slightly different direction. SO one purple universe is in in feet and inches but remains ostensibly invisible to another purple universe precipitated into meters and kilometers (invisible as in Heisenberg's Uncertainty and Schodingers Cat).

(*)INTERGRATED - is like dissolving a spoon of sugar into a cup of hot water. The sugar and the water become INTEGRATED. It is not really feasible to retrieve them back as they were at the start. Hypothetically if you tried to do this there would be unpredictable shortfalls.

A further extension can be gained by consideration of application of the Nyquist-Theorum and our inability at extreme scales to 'see' the detail of what is actually going on. This of course takes the domain of contemplation down from Classical levels to details perhaps influencing Quantum levels and the difficulties in understanding the salience of the properties of waves in a reductionist first principles sense in their effect on the determination (causality) of the Quantum affects that we are currently unable to work with in terms of its deterministic influence on Classical systems that are its siblings.

The thing about this hypotheses is that with slightly divergent 'arrows of time' and/or different 'colours' of universes (places) there could be overlap and shared effects between them like what is proposed by Dark Matter and Dark Energy. This can also be extended if you decide that time/light is kinetic as a result of the application of a measurement instrument (like the retina) where it gains its measurable and Classical properties, but in between is mostly or all PE / waves that can't be measured and so must be defined differently in terms of its existence because just like the pendulum there is not actual information yet available to describe anything about it when it is PE before it transduces into at least some KE (over the singularity) where properties and attributes become available for empirical description. So the effects of Dark Matter and Dark Energy upon out purple universe are complicated by the notion that in-between being KE in the unseen red universe, the stuff of the red universe is also PE and so does not Classically exist in the absence of perception by an inhabitant of the red universe, though our purple perception notices the effect of it on our matter and stuff. Nothing of course the ultimate complication (that I did not come up with – it was Michelle Young's idea – only joking) is that elements of the red universe gaining KE properties affecting our properties because individual members of the red universe have actually perceived their world into existence.

REALITY

"What is reality made of?" I were a physicist I would defer to one or the other experienced experts and simply re-factorise what has been so consistently correct and answer providing their own answer namely but not being light. If it weren't for the fact that Einstein made his accuracy more memorable by emitting the 'standard error', that is, the small details of his conclusions. Since my purpose is to make (extraordinary) claims about me having actually reached any conclusions, I would want to say that I can identify approximately four elements of calculation that he probably intentionally omitted that would change the durability and practicality of his achievements. Since this is not a physics book, but philosophy seems to so often precede science, I will briefly say that in my view he decided to omit (in his pivotal (E=MC2) the features that impede propogation of light (and I am omitting non inertial frame of reference type detail).

So I will suggest that these include 'friction' (for example, the cancellation of irregular parts of any propagating wave that comes into contact with any other part of any other wave of a similar bandwidth that will unavoidable lead to some cancellation of the wave, in itself resulting in some effect when the wave front has to collapse into a particle at some point), pressure, a singularity that is the antecedent of propagation, and the inability to avoid any form of gravitation effect at all. So Schrodingers cat can now be in a box with some holes in it, because there are measurable losses between the source propagated as a wave, and the ultimate destination that must be a particle must first collapse to be able to cause the cat any harm, if the losses exceed some critical level the cat might be able to take a hit and remain OK, or it simply gets 'bathed' in a wave pattern which is distributed in a manner that is less harmful.

SO finally, WRT to the initial question, in my view, 'tangible' classical reality is made of (simplified) losses times the speed of light squared, divided by energy (multiplied by a singularity between PE → KE +/- frame of reference). But since the clock face stops moving at the speed of light, then time normally equalling distance (ignoring ever present gravitational anomalies), must also be stationary at that speed, meaning time and light are fully 'integrated' (indivisible) at that speed (ignoring losses), so 'tangible' reality M is equal to time/light (same thing) squared divided by the (framed) measurable energy (that CERN measures) +/- some singularity (which is actually expressed by the frame).